B8 64. (formerly 63, renumbered 64 by the Examiner and now AMENDED) The composite material of Claim 51, wherein the second layer of the substrate has a pH in the range between of from about 1 to 7.

B9 67. (formerly 66, renumbered 66 by the Examiner and now AMENDED) The composite material of Claim 51, wherein the second layer of the substrate has a pH in the range of from 7 to about 14.

B10 72. (formerly 71, renumbered 72 by the Examiner and now AMENDED) The composite material of Claim 51, wherein the surfactant may be selected from a class of surfactants having disulfide bond or a containing a ketal group, or a siloxal group.

Elections/Restrictions

Applicants hereby affirm the election, with traverse, to prosecute the invention of Group I and the species election of a non-woven substrate.

Claim Rejections - 35 USC § 112

Claims 1, 8, 9, 12, 18, 23, 64, 67 and 72 were rejected as indefinite under § 112, second paragraph. Applicants respectfully submit that the above amendments remove the § 112 rejections of Claims 1, 8, 9, 12, 18, 23, 64, 67 and 72.

Claim Rejections - 35 USC § 102/103

Claims 1-5, 15-25, 51,61 and 70-74 were rejected as being anticipated, or in the alternative obvious, over International Application Number WO 00/50098. Applicants respectfully traverse the rejection for at least the following reasons.

As the Examiner has correctly pointed out, International Application Number WO 00/50098 describes materials that are treated with a surfactant, for example AHCOVEL Base N-62. More specifically, International Application Number WO 00/50098 describes materials that are treated with a surfactant-modified odor control agent, for example a blend of AHCOVEL Base N-62 with EDTA or a sodium salt of EDTA as described on page 15 of WO 00/50098. The present invention also

includes a material treated with one or more surfactants such as AHCOVEL Base N-62, or even a surfactant-modified odor control agent such as one of the surfactant-modified odor control agents described in WO 00/50098. However, the present patent application is directed to a composite material that not only includes a first layer that includes or is treated with a surfactant but also includes an additional **second layer that inactivates the surfactant**.

The Examiner has also correctly pointed out that WO 00/50098 teaches that the surfactant-modified odor control agent treated material may be a multilayer material. However, WO 00/50098 does not disclose a second layer in a multilayer, surfactant-treated material that inactivates the surfactant of another layer. Specifically, WO 00/50098 does not disclose a layer that inactivates a surfactant. More specifically, WO 00/50098 does not disclose a first layer that includes a surfactant **and a second layer that inactivates the surfactant**. Examples of second layers that inactivate the surfactant include layers that are treated with an amount of acid or an amount of base so that the treated layer inactivates or degrades surfactant that is transmitted from the first layer containing the surfactant and comes into contact with the second layer. WO 00/50098 does not disclose such a layer. Accordingly, Applicants respectfully submit that the present invention, a composite material include a first layer including a surfactant and a second layer that inactivates the surfactant, is not anticipated by or obvious in view of WO 00/50098. Therefore, Applicants respectfully request the Examiner to withdraw the rejection of the present claims in view of International Application Number WO 00/50098.

not claiming treating the 2nd layer w/ surfactant acid or base

Applicants submit that the present application is now in condition for allowance. Accordingly, Applicants respectfully request that the pending rejections be withdrawn and a Notice of Allowance issued. Should any questions arise with regard to this application the Examiner is encouraged to contact the undersigned at (770) 587-8620.

Please charge any prosecutional fees which are due to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875.

Respectfully submitted,

Yahiaoui et al.

By _____
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CERTIFICATE OF FACSIMILE TRANSMISSION

I, Christos S. Kyriakou, hereby certify that on May 27, 2003, this document is being mailed to The United States Patent and Trademark Office via first class mail to: Commissioner of Patents, P. O. Box 1450, Alexandria, Virginia, 22313-1450.

By _____
Christos S. Kyriakou

App nded Copy Of Marked Up Claims and Specification As Amended

(Provided For The Examiner's Convenience)

1. (AMENDED) A composite material comprising:

a substrate, said substrate [further] comprising at least a first layer and a second layer, said first layer having a first surface and a second surface; and

a surfactant applied to the first layer of the substrate;

wherein the surfactant [acts to lower] lowers the surface tension of a fluid which contacts the first layer of the substrate [such that the fluid is allowed or more readily enabled to pass through the first layer of the substrate,] but [such that the surfactant] does not substantially adversely effect the absorption capacity or wicking height of the second layer of the substrate[, as] and the second layer of the substrate substantially inactivates the surfactant.

8. (AMENDED) The composite material of Claim 6, wherein the second layer [of the substrate is highly acidic] has a pH of less than about 6.

9. (AMENDED) The composite material of Claim 6 wherein the second layer of the substrate has pH in the range from about 1 to [about, but not equal to,] 7.

12. (AMENDED) The composite material of Claim 7, wherein the second layer of the substrate has pH in the range from [about, but not equal to, 7] to about 14.

18. (formerly not numbered and renumbered 18 by the Examiner, AMENDED) The composite material of Claim 1, wherein the surfactant is selected from a class of surfactants having a disulfide bond or those containing a ketal group[,] or a siloxal group [or the like].

24. (formerly 22 and renumbered 23 by the Examiner, AMENDED) A multi-layered substrate with a surfactant applied thereto, said surfactant selected from the group consisting of a class of surfactants having a disulfide bond, a ketal group, or a siloxal group [or the like],

wherein said surfactant lowers the surface tension of fluids contacting the substrate to which the surfactant is applied such that fluid intake into the substrate is not substantially adversely effected, and such that the surfactant is substantially inactivated upon contacting the second layer of the substrate.

64. (formerly 63 and renumbered 64 by the Examiner, AMENDED) The composite material of Claim 51, wherein the second layer of the substrate has a pH in the range between of from about 1 to [and about, but not equal to,] 7.

67. (formerly 66 and renumbered 66 by the Examiner, AMENDED) The composite material of Claim 51, wherein the second layer of the substrate has a pH in the range of from [between about, but not equal to,] 7 [and] to about 14.

72. (formerly 71 and renumbered 72 by the Examiner, AMENDED) The composite material of Claim 51, wherein the surfactant may be selected from a class of surfactants having disulfide bond or a containing a ketal group, or a siloxal group [or the like].

SURFACTANT SYSTEMS FOR PERSONAL CARE PRODUCTS

This application claims priority from US Provisional Application no. 60/254,213 filed December 8, 2000.

FIELD OF THE INVENTION

This invention relates to the use of surfactants which may be inactivated or degraded upon contact with one or more materials possibly in one or more layers of a substrate. The composite material includes a surfactant that can be applied to the top layer of the [a] substrate such as a nonwoven web such that the surfactant reduces the surface tension of a[n insulating] fluid so that the fluid intake through the top layer into the substrate is [not substantially adversely effected] enhanced and such that the surfactant is inactivated upon contacting or passing into another portion of the substrate.

BACKGROUND OF THE INVENTION

Surfactants are well-known compounds that are used in many fields to provide low surface tension to water or other fluids [solutions] resulting in increased wettability, spreadability, emulsification, dispersion, penetration, and/or improved adhesion. Some surfactants also are known to impart softness characteristics to certain products, such as tissue.

While surfactants may produce a number of desired properties and benefits, prior usage of articles containing surfactants or having surfactants on the surface of the substrate reveals that surfactants frequently have adverse effects on the properties of the materials and/or surroundings to which the surfactants pass. For example, a surfactant is most commonly applied to a surface of a substrate in anticipation of fluid contact; however, after the surfactant is contacted by a fluid, some or all of the surfactant typically dissolves in the fluid and flows [migrates] into the substrate with the fluid. The presence of the surfactant in the fluid [during use] in the [may] substrate may result in reduced fluid flow (wicking) through the substrate due to reduced fluid surface tension which reduces capillary pressure. That is, if the substrate contains a surfactant [but no superabsorbent material,] the surfactant will enhance [initially accelerate] the passage of a contacting fluid into

the substrate. However, the presence of the surfactant in the fluid reduces the wicking force (speed) and thus the substrate directly under the liquid penetration point can become saturated. This saturation will restrict the passage of more fluid into the substrate which may result in leakage and, [and if the substrate is a material such as pulp, the substrate may become saturated by the fluid which accumulates in the substrate rather than wicking further into the absorbent article, resulting in swelling which occurs in an undesired manner, producing] an undesirable appearance of the product or even adverse contact with the skin of the wearer. The presence of a superabsorbent in the substrate magnifies the problem. As the surfactant containing fluid is being wicked at a slower rate, the fluid has a longer residency time near the superabsorbent near the fluid entry location into the substrate. These superabsorbent particles continue to swell and absorb fluid which eventually will lead to "gel blocking". [If the substrate contains a superabsorbent material and the surfactant remains active, the undesired swelling increases the frequency of "gel blocking".] More specifically, the phenomenon of gel blocking describes the tendency of hydrogel materials or so-called "superabsorbent materials" to swell in place once wetted and produce gelatinous material which blocks further transmission of the fluid being absorbed. The gelatinous material not only effects the fluid intake or absorption properties of the superabsorbent material, but also inhibits the wicking and dispersion properties of the total absorbent material. [Therefore, where the fluid being absorbed contacts the absorbent material in a highly localized area at a rate which exceeds that which the superabsorbent material can readily tolerate, much of the absorbent medium frequently is not utilized at all, thus resulting in an inefficient product.]

To maximize the utilization of the superabsorbent material in a substrate, it is desirable to have the superabsorbent absorb slowly and the liquid to wick quickly to minimize gel blocking. Both slowing down the superabsorbent absorbency rate and increasing the liquid wicking rate can be accomplished by reducing the active surfactant in the fluid.